

**CLAIMS**

1. An arrangement (12; 16) for feeding animals on a farm, characterized in:

- an on-farm analyzer device (13; 17) provided for measuring the amount of at least one constituent of solid feed to be fed to said animals; and

- a feeding device (14; 18) provided for feeding said animals depending on the result of said measurement,

2. The arrangement of claim 1 wherein said on-farm analyzer device is provided for measuring the amount of said constituent of said solid feed immediately prior to the feeding of said animals.

3. The arrangement of claim 1 wherein said on-farm analyzer device is provided for measuring the amount of said constituent of said solid feed a plurality of times per day, and preferably at least three times per day.

4. The arrangement of any of claims 1-3 wherein said on-farm analyzer device is provided for real time or near real time measurements of the amount of said constituent of said solid feed.

5. The arrangement of any of claims 1-4 wherein said solid feed is ensiled feed.

6. The arrangement of any of claims 1-5 wherein the amount of said constituent includes any of protein content, dry content, and fiber content, particularly neutral detergent fiber (NDF) content.

7. The arrangement of any of claims 1-6 wherein said on-farm composition analyzer device is provided for measuring the amount of a plurality of constituents of said solid feed, and said feeding device is provided for feeding said animals  
5 depending on the result of said measurement.

8. The arrangement of any of claims 1-7 wherein said on-farm analyzer device (13; 17) is provided for measuring the amount of said constituent of solid feed to be fed to said animals repeatedly.

10 9. The arrangement of claims 8 wherein said feeding depends on an average value of said repeatedly measured amounts of said constituent.

15 10. The arrangement of any of claims 1-9 wherein said on-farm analyzer device is a spectroscopic device for quantitative chemical analysis.

11. The arrangement of any of claims 1-10 wherein said on-farm analyzer device is a near infrared (NIR) instrument.

12. The arrangement of any of claims 1-11 further comprising

- a computer-based processing and control device (11, 15)  
20 provided for the management of said animals including controlling of the feeding of said animals, wherein

- said processing and control device

- comprises a database including updated information regarding feed consumption by said animals;

25 - is connected to receive said respective measured amounts of said constituent of said solid feed;

- is provided to calculate an amount of solid feed to be fed to said animals based on the result of said measurement and said updated information comprised in said database; and

5 - is connected to indicate to said feeding device said calculated amount of solid feed to be fed to said animals.

13. The arrangement of any of claims 1-12 wherein said feeding device is provided for feeding said animals with mixed solid feed having a balanced composition depending on the result of  
10 said measurement.

14. The arrangement of any of claims 1-12 wherein said feeding device is provided for feeding said animals with solid feed comprising ensilage and concentrate and/or additives depending on the result of said measurement.

15 15. The arrangement of any of claims 1-14 wherein said animals are grouped in different groups, and wherein said feed device is provided for feeding different groups of animals with total mixed rations (TMR) of solid feed independently and depending on the result of said measurement.

20 16. The arrangement of claim 15 wherein said animals are grouped in different groups depending on body condition, and, provided that the animals are milking animals, depending on milk production, days in lactation, or number of lactations.

25 17. The arrangement of any of claims 1-14 wherein said animals have supply of partial mixed rations (PMR) of solid feed, including ensilage and concentrate, and wherein said feed device is provided for feeding each of said animals with additional concentrate feed individually and depending on the result of said measurement.

18. The arrangement of any of claims 1-14 wherein said animals are grouped in different groups, and wherein said feed device is provided for (i) feeding different groups of animals with roughage or ensilage depending on the result of said measurement, and (ii) feeding said animals with concentrate or additives individually and depending on the result of said measurement.

19. The arrangement of any of claims 1-14 wherein said feed device is provided for feeding different individuals of said animals with solid feed individually depending on the result of said measurement.

20. The arrangement of any of claims 1-19 wherein said feeding device is a vehicle (14) filled with said solid feed, and said on-farm analyzer device (13) is provided at said vehicle for measuring the amount of said constituent of said solid feed.

21. The arrangement of any of claims 1-19 wherein said feeding device is a feed wagon (18), preferably an in-door feed wagon mounted on a rail in a ceiling, for automatic feeding.

22. The arrangement of any of claims 1-21 further comprising a device (19), preferably a weighing machine or an optical device with image processing capabilities, provided for establishing in connection with said feeding, the actual feed consumption by said animals, wherein said feeding device is provided for feeding said animals depending on the established actual feed consumption by said animals.

23. The arrangement of any of claims 1-22 wherein said animals are milking animals, and wherein said arrangement further comprising a device (20) provided for measuring a quality or a quantity of milk from said milking animals, and said feeding

device is provided for feeding said milking animals depending on the measured quality or quantity of milk from said milking animals.

24. The arrangement of any of claims 1-23 further comprising a  
5 device (20) provided for measuring a quality of manure from said animals, wherein said feeding device is provided for feeding said animals depending on the measured quality of manure from said animals.

25. A method for feeding animals on a farm,  
10 characterized by the steps of:

- measuring the amount of at least one constituent of solid feed to be fed to said animals by an on-farm analyzer device (13; 17); and
- feeding said animals by a feeding device (14; 18), wherein
- 15 - said feeding is performed depending on the result of said measurement; and
- the amount of at least one constituent of solid feed to be fed to said animals is measured by said on-farm analyzer device at least on a daily basis, preferably a plurality of times per day, more preferably at least three times per day, and most preferably immediately prior to the feeding of said animals.

26. An analyzer device (13; 17), characterized in that said analyzer device is provided to be used on a farm housing animals; is provided for measuring at least on a daily basis the amount of at least one constituent of solid feed to be fed to said animals on said farm; and is provided with means for transferring the measured amount of said constituent of said solid feed to a feeding device (14; 18) provided for

immediate feeding of said animals depending on the result of said measurement.